Dear CVRI Members,

We are living in an unprecedented time that presents new challenges daily, on a personal and global level. The COVID-19 pandemic has created a halt in our everyday lives and has forced the world to focus on the health and well-being of others in their communities. Major events have been canceled, businesses have shut down, classes are being taught online, people are encouraged to stay at home and visit with their loved ones virtually. Like many other health institutions, the CVRI has rescheduled the 8th Annual Symposium in support of this global effort: reduce the spread of the virus.

The mission of the Cardiovascular Research Institute at Baylor College of Medicine is to serve as an avenue for increased collaborative research efforts. Now more than ever, we are reminded how important it is to serve our community and improve the development of cutting edge technologies and increase clinical awareness.

In a recent interview, the CVRI’s Associate Director Biykem Bozkurt, MD, PhD, describes the urgency to educate our frontline providers to better understand the COVID-19 virus. Serving as a local, regional, and global leader who advocates continuous training and development, Dr. Bozkurt emphasizes the CVRI’s mission to increase research and integration of multi PI collaborations to advance the care of cardiovascular disease and heart failure in relation to COVID-19.

The CVRI and Baylor College of Medicine will continue to contribute and support the global effort of defeating COVID-19 and future epidemics. We appreciate your continued support of the Cardiovascular Research Institute, and look forward to seeing you in the near future.

Thank you,

Xander Wehrens, MD, PhD
CVRI’s Associate Director Dr. Biykem Bozkurt highlights urgent efforts to serve and guide patients as clinicians and to understand the COVID-19 virus as educators and scientists.

Biykem Bozkurt, MD, PhD, is the Medical Care Line Executive (Medicine Department Chair) and Director of the Winters Center for Heart Failure at the Michael E. DeBakey VA Medical Center. She also serves as the Vice Chair of the Department of Medicine, the Mary and Gordon Cain Chair, Professor of Medicine, and Associate Director of the Cardiovascular Research Institute at Baylor College Medicine. Her national roles include President of the Heart Failure Society of America, Senior Associate Editor of Circulation, and Heart Failure Section Editor for the Journal of the American College of Cardiology. She currently is the Chair of the Heart Failure Council at the American College of Cardiology and Chair of the ACCF/AHA Task Force for Clinical Data Standards.

As an executive leader, Dr. Bozkurt collaboratively works on several task forces to shape, plan and facilitate clinical readiness for COVID-19 at Baylor College of Medicine and satellite facilities (MEDVAMC, BSLMC, SLEH, TCH). The task force addresses the need for, “care delivery, patient management, new models of care and the safety and protection of health care workers.” Her local task force effort involves multiple meetings with regional groups at the department level and institutional level to implement plans such as “readiness for surge and appropriate utilization of management strategies.” From a Division of Cardiology perspective and in an effort to increase hospital capacity for the anticipated surge in COVID cases, Dr. Bozkurt’s states that, “every institution has a surge plan in place that will initially deploy critical certified providers and then expand the critical care certified to cardiologists, cardiac surgeons and other clinicians.”

A second task force involvement is implementing alternative models of care in support of the safe distancing and flattening the curve initiative. Elective procedures are postponed. Clinic visits are changed to non-face to face encounters. As part of the frontline team, Dr. Bozkurt and BCM/VA cardiology have embraced telehealth services. She serves her patients via video conferencing, e-consults, and telephone. The VA has consistently used this non-face-to-face method in about 20% of encounters, but this has increased considerably at all sites during the COVID-19 pandemic.

She has also been a vocal supporter for more protection of front line healthcare workers. On March 30, 2020, Dr. Bozkurt along with other organizations sent an open letter to Congress urging for federal action to address medical equipment shortages.

Further impact of this new alternative care model is the learning and training of cardiovascular fellows, residents, medical students, and graduate students. BCM Cardiology and the CVRI continue to adapt to new paradigms of education, which include providing PhD courses virtually through Zoom and Blackboard. Dr. Bozkurt, Chair of Medicine at the MEDVAMC expressed, “While residents and fellows are still frontline responders, the dissemination of information to trainees is now supplemented with a virtual curriculum of online simulation and training”.

CVRI Leadership’s Impact and Insight on COVID-19

FACULTY HIGHLIGHT

Telehealth at BCM

McNair clinical staff demonstrate social distancing.

Baylor St. Luke’s Cath Lab Team
The National School of Tropical Medicine and the Center for Vaccine Development are globally recognized institutions. Dr. Maria Elena Bottazzi and Dr. Peter Hotez, are seeking to develop a vaccine for SARS-CoV-2.

BCM with Dr. Meredith Reyes, Associate Professor of Pathology and the Gulf Coast Regional Blood Center, will come together as part of a transfusion study. Convalescent plasma will be collected from COVID-19 survivors and in turn will be provided to the most critically ill patients with COVID-19 infection.

Dr. Hana El-Sahly, Associate Professor Molecular Virology & Microbiology and Medicine and the Principal Investigator for the Vaccine and Treatment Evaluation Unit at Baylor, is the principal investigator for a treatment trial of COVID-19 patients.

Dr. Pedro Piedra’s laboratory is developing an antibody test to identify recent or past infections with SARS-CoV-2. Dr. Bozkurt stresses the need for further widespread study on COVID-19 consequences in patients with preexisting heart disease and its effects on heart function. The CVRI is an important integrator of such research initiatives with increased communication, partnership, multiple PI grant applications, and several collaborative grant submissions to AHA. Dr. Bozkurt and the CVRI are also in the process of creating a combined COVID-19 registry at BCM and the TMC. Currently there are opportunities available to all investigators for patient treatment strategies as part of randomized clinical trials at BCM and TMC.

Some notable research studies on treatment strategies are being led by CRVI investigators. An important concept studied is that cardiac inflammatory cytokines play a major role in heart failure and cardiomyopathy caused by COVID-19. The CVRI has integrated multidisciplinary collaborative research groups that examine the role of inflammation and cytokines. Moreover, the Center for Translational Inflammatory Research at the MEDVAC is looking at options to profile cytokine levels or inflammatory markers in blood samples from COVID-19 patients to determine whether it could be used for targeted research based therapies. In the realm of basic and translational science, investigators with a track record of looking at both arrhythmia and cardiac myocyte physiology are currently examining the possibility of new treatment options for arrhythmias commonly seen in COVID-19 patients.

The Cardiovascular Research Institute aims to form collaborations with basic science investigators looking at cellular changes caused by cell death, heart failure, and arrhythmias. Dr. Bozkurt and the CVRI are committed to organizing widespread clinical research studies focused on COVID-19 patients to create a better understanding of changes that occur in the heart and blood, and most importantly to discover new applications for treatment. For Dr. Bozkurt, the outbreak of COVID-19 evokes a life-long calling to care and educate patients and the public; re-invigorates the urgency for scholarly research and fuels the tireless pursuit of innovation.

Further resources regarding the novel corona virus can be found in the following Baylor website. Coronavirus Preparedness
HONORS AND AWARDS

Congratulations!

- BCM and UH collaborative pilot grants awarded funding to Dr. Na Li, Assistant Professor of Cardiovascular Research at Baylor, and Dr. Bradley K. McConnell, Associate Professor of Pharmacology at UH. They will work on a project titled, “Reprogrammed Cardiac Progenitor Cells into Cardiac Conduction Cells for Heart Repair.”

- CPRIT awarded Dr. Joshua Wythe, Assistant Professor of Molecular Physiology & Biophysics, a $899,847 grant for “Targeting Endothelial Transcriptional Networks in Glioblastoma.”

- CVRI’s Theme Leader, Dr. Christie Ballantyne was awarded a $6 million grant by the The National Institutes of Health Heart, Lung, and Blood Institute to study how CHIP contributes to atherosclerotic cardiovascular diseases.

- Dr. Ourania Preventza, Professor in the Division of Cardiothoracic Surgery was named president-elect of the International Society of Endovascular Specialists (ISEVS). Dr. Preventza is the first woman named president-elect of this society. She was also named Associate Editor of “Operative Techniques in Thoracic and Cardiovascular Surgery: A Comparative Atlas,” one of the official journals of the American Association for Thoracic Surgery (AATS).

- Dr. Elena Ocampo, Assistant Professor of Pediatrics – Cardiology received BCM’s Women of Excellence Award. Dr. Joseph S. Coselli, Professor, Vice-Chair and Chief of the Division of Cardiothoracic Surgery received the Leader of Distinction Award from the Marfan Foundation.

- Dr. Shawn Groth, Associate Professor in the Division of General Thoracic Surgery, was appointed to the editorial board of the Journal of Thoracic and Cardiovascular Surgery.

- Dr. Kenneth L. Mattox, Distinguished Service Professor in the Division of Cardiothoracic Surgery was inducted as a member of the American College of Surgeons Academy of Master Educators.

- Dr. Joseph L. Mills Sr., Professor and Chief of the Division of Vascular Surgery and Endovascular Therapy was named associate editor of the European Journal of Vascular and Endovascular Surgery.

- Dr. Ravi K. Ghanta, Associate Professor of Surgery, received $15,000 in funding from an FY20 Pilot Award through the Baylor College of Medicine Cardiovascular Research Institute. His project is titled “Immune Evasive Alginate Encapsulation for Sustained Cell Therapy for Heart Failure.”

- Dr. Ying Shen, Professor of Surgery in the Division of Cardiothoracic Surgery and Director of the Aortic Diseases Research Laboratory, and Dr. Scott LeMaire, Professor of Surgery and Molecular Physiology & Biophysics, received a three-year, $750,000 Collaborative Sciences Award from the American Heart Association to fund their multidisciplinary (radiology and surgery) study on early detection of aortic degeneration using nanoparticle contrast-enhanced computed tomography (CT) imaging.

- Michael E. DeBakey Department of Surgery named as a participating site for a “CTSNet” trial. This new project is “Anti-coagulation for New-Onset Post-Operative Atrial Fibrillation after CABG” (CTSN PACES) Trial. Dr. Todd K. Rosengart will serve as site principal investigator, and be assisted by co-investigator Dr. Ravi K. Ghanta, Associate Professor in the Division of Cardiothoracic Surgery.

- Dr. Kenneth Liao, Professor and Lester and Sue Smith Endowed Chair of Surgery, will receive over $3.5 million in funding from the Brockman Charitable Trust, for his study titled, “Increasing Heart Transplantation by Using Organs from Donors after Circulatory Death.”

NEW CVRI ADMINISTRATIVE TEAM

- **Sousan Arab** is the new CVRI Administrator. She has an extensive background in business administration and has been with Baylor for over three years. Sousan manages the administrative duties of the CVRI in the areas of operations, financial management, annual planning, and communications.

- **Lane Carpio** is the new business operations coordinator. Her background is in event management along with years of experience in patient and student education. Lane supports CVRI administrative operations to include education and scientific programs.
SAVE THE DATE
& CALL FOR ABSTRACTS
Cardiovascular Research Institute
8th Annual Symposium

Wednesday, April 7, 2021
Cullen Auditorium/Rayzor Lounge
1 Baylor Plaza
Houston, TX 77030

Featured Keynote Speaker
Alan Daugherty, PhD, DSc
University of Kentucky
Director, Saha Cardiovascular Research Center
Gill Foundation Chair, Preventive Cardiology Chair, Department of Physiology
Senior Associate Dean for Research
Associate Vice President for Research

*Due to the COVID-19 pandemic, the CVRI Symposium was postponed to 2021.*
The Cardiovascular Research Institute at Baylor College of Medicine conducts a monthly seminar series during the spring and fall of each year open to all faculty and students who are interested.

**Wednesdays, 12 PM to 1 PM**
**Room 301A, Cullen Building**
**One Baylor Plaza**
**Lunch and Refreshments Served**

### August 26, 2020

**Speaker: Michihisa Umetani, Ph.D.**

Title: Assistant Professor, Department of Biology and Biochemistry  
Affiliation: University of Houston

### September 16, 2020

**Speaker: Stanley Nattel, M.D.**

Title: Professor, Department of Medicine  
Affiliation: University of Montreal

### October 21, 2020

**Speaker: Huaizhu Wu, M.D.**

Title: Associate Professor, Department of Medicine  
Affiliation: Baylor College of Medicine

### November 18, 2020

**Speaker: Vasanth Vedantham, M.D., Ph.D.**

Title: Associate Professor, Department of Medicine  
Affiliation: University of California, San Francisco

### December 2, 2020

**Speaker: Aarif Khakoo, M.D.**

Title: Head of Drug Development  
Affiliation: Calico Life Sciences

*Mark L. Entman, MD, Distinguished Lecture in Cardiovascular Research*

*Due to the Covid-19 pandemic, the remaining spring 2020 seminars were canceled.*
The Cardiovascular Research Institute has been actively working to expand training programs in cardiovascular sciences. This academic year, the CVRI offers 3 graduate school courses that are open to PhD students, postdocs, and clinical trainees. Due to the COVID-19 pandemic, all lectures are currently offered by Zoom and slides are on Blackboard.

- The 3rd term course ‘Cardiovascular Diseases’ successfully completed earlier this year.
- The current 4th term course is, "Advanced Topics and Cardiovascular Physiology".
- The next 5th term course, "Advanced Topics in Cardiovascular Disease Pathogenesis" is available to all who want to register, audit or just listen.

Lectures are held Monday - Thursday,
9 AM - 10 AM
May 18, 2020 - July 9, 2020

Click to enter the zoom meeting.
Meeting ID: 030904

For those who do not want course credit and are just interested in the topic, these lectures are available at no cost. The lecture titles are listed below. Please join us in Zoom. This is one of the services provided by CVRI to promote education in cardiovascular sciences.

**Advanced Topics in Cardiovascular Disease Pathogenesis**

**Course Schedule:**

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<thead>
<tr>
<th>Date</th>
<th>Lecture Title</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>05/18/20</td>
<td>Vascular Anatomy</td>
<td>Joshua Wythe</td>
</tr>
<tr>
<td>05/19/20</td>
<td>Pathogenesis of Peripheral Artery Disease and Deep Venous Thrombosis</td>
<td>Walied Ageedi</td>
</tr>
<tr>
<td>05/20/20</td>
<td>Pathophysiology of Renovascular Disease and HTN Due to Kidney Disease</td>
<td>Sai Saridey</td>
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<tr>
<td>05/21/20</td>
<td>Plaque Rupture</td>
<td>Yochai Birnbaum</td>
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<tr>
<td>05/26/20</td>
<td>Risk Factors &amp; Lipid Management</td>
<td>Salim S. Viroli</td>
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<tr>
<td>05/27/20</td>
<td>Epidemiology and Pathogenesis of Hypertension</td>
<td>Bryan Tucker</td>
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<tr>
<td>05/28/20</td>
<td>Vascular Development</td>
<td>Joshua Wythe</td>
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<tr>
<td>06/01/20</td>
<td>Vessels of the Heart</td>
<td>Xinchun Pi</td>
</tr>
<tr>
<td>06/02/20</td>
<td>Congenital Vascular Abnormalities</td>
<td>Xinchun Pi</td>
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<tr>
<td>06/03/20</td>
<td>Hemoglobinopathies</td>
<td>Neil Hanchard</td>
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<tr>
<td>06/04/20</td>
<td>Inherited Bleeding Disorders</td>
<td>Hyojeong Han</td>
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<tr>
<td>06/08/20</td>
<td>Hemostasis - Coagulation</td>
<td>Miguel Cruz</td>
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<tr>
<td>06/09/20</td>
<td>Hemostasis - Platelets</td>
<td>Vinod Vijayan</td>
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<tr>
<td>06/10/20</td>
<td>Acquired Bleeding/Coagulation Disorders</td>
<td>Miguel Cruz</td>
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<td>06/16/20</td>
<td>Microcirculation 1</td>
<td>David Durgan</td>
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<tr>
<td>06/17/20</td>
<td>Microvascular Water and Solute Transport</td>
<td>David Durgan</td>
</tr>
<tr>
<td>06/18/20</td>
<td>Genetics of Hypertension</td>
<td>Neil Hanchard/Ian Copeland</td>
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<tr>
<td>06/22/20</td>
<td>Hypertension and Microbial- Derived Metabolites</td>
<td>David Durgan</td>
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<tr>
<td>06/23/20</td>
<td>Lipids and Lipoproteins</td>
<td>William Lagor</td>
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<tr>
<td>06/24/20</td>
<td>Cholesterol Metabolism</td>
<td>William Lagor</td>
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<tr>
<td>06/25/20</td>
<td>Monogenic Lipid Disorders</td>
<td>Chris Walkey</td>
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<tr>
<td>06/29/20</td>
<td>Role of Lipids In Atherosclerosis</td>
<td>William Lagor</td>
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<tr>
<td>06/30/20</td>
<td>Endothelial Dysfunction In Atherosclerosis</td>
<td>Xinchun Pi</td>
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<tr>
<td>07/01/20</td>
<td>Macrophages/Macrophages In Atherosclerosis</td>
<td>Haixia Wu</td>
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<tr>
<td>07/02/20</td>
<td>Pathogenesis of Stroke</td>
<td>Louise McCullough</td>
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<tr>
<td>07/06/20</td>
<td>Vascular Anceurysms</td>
<td>Ying Shen</td>
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<tr>
<td>07/08/20</td>
<td>Neural Control of Breathing and Heartbeat</td>
<td>Russell Ray</td>
</tr>
<tr>
<td>07/09/20</td>
<td>Risk Factors &amp; Treatment of Stroke</td>
<td>Bharti Manwani</td>
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</table>
Incidence and Outcomes of Acute Coronary Syndrome After Transcatheter Aortic Valve Replacement.

Racial Differences in Malignant Left Ventricular Hypertrophy and Incidence of Heart Failure: A Multicohort Study.

Palliative care use in patients with acute myocardial infarction.

Aberrant expression of a non-muscle RBFOX2 isoform triggers cardiac conduction defects in myofibrotic dystrophy.

Rivaroxaban compared with standard anticoagulants for the treatment of acute venous thromboembolism in children: A randomised, controlled, phase 3 trial.

Expanding traditional cardiac rehabilitation in the 21st century.

Prevention of connexin-43 remodeling protects against duchenne muscular dystrophy cardiomyopathy.

Association of Isolated Diastolic Hypertension as Defined by the 2017 ACC/AHA Blood Pressure Guideline with Incident Cardiovascular Outcomes.

Substance and substrate: LVEF and sex subgroup analyses of PARAGON-HF and PARADIGM-HF trials.

Prediction of individualized lifetime benefit from cholesterol lowering, blood pressure lowering, antithrombotic therapy, and smoking cessation in apparently healthy people.

Integrating Mouse and Human Genetic Data to Move beyond GWAS and Identify Causal Genes in Cholesterol Metabolism.

Critical Role of Cytosolic DNA and Its Sensing Adaptor STING in Aortic Degeneration, Dissection, and Rupture.

The Deep Genome Project.
### NHLBI COVID-19 RELATED FUNDING OPPORTUNITIES

- **PA-18-591** Administrative Supplements to Existing NIH Grants and Cooperative Agreements (Parent Admin Supp Clinical Trial Optional)

- **PA-18-935** Urgent Competitive Revision to Existing NIH Grants and Cooperative Agreements (Urgent Supplement - Clinical Trial Optional)

The CVRI has been advised by the NHLBI that principal investigators are requested to contact the program officer of their currently funded grant(s) to request preapproval prior to applying to these supplements. It is recommended to provide key information about the parent grant (grant number, title, major scope) and how the supplement would be a logical extension of the parent grant. Include proposed specific aims for the supplement in the communication with the PO. Please click on the link for FAQ.

### AMERICAN HEART ASSOCIATION FUNDING OPPORTUNITIES

#### 2020-2021 AHA RESEARCH FUNDING APPLICATION DEADLINES*

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<tr>
<th>Program</th>
<th>Letter of Intent Deadline (if required)</th>
<th>Application Deadline</th>
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<tr>
<td>AHA Predoctoral Fellowship</td>
<td>Wed, Sept 9, 2020</td>
<td>Jan 1, 2021</td>
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<tr>
<td>AHA Postdoctoral Fellowship</td>
<td>Thurs, Sept 10, 2020</td>
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<tr>
<td>Institutional Undergraduate Student Training Program</td>
<td>Tues, Sept 15, 2020</td>
<td>Jan 1, 2021</td>
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<tr>
<td>Merit Award</td>
<td>Required by Thurs, Oct 1, 2020</td>
<td>Invited Applicants: Thurs, Nov 10, 2020</td>
<td>April 1, 2021</td>
</tr>
<tr>
<td>Established Investigator Award</td>
<td>Required by Wed, Oct 14, 2020</td>
<td>Invited Applicants: Thurs, Jan 14, 2021</td>
<td>April 1, 2021</td>
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<tr>
<td>Career Development Award</td>
<td>Thurs, Dec 3, 2020</td>
<td>April 1, 2021</td>
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<tr>
<td>AHA Institutional Research Enhancement Award (AIREA)</td>
<td>Tues, Jan 12, 2021</td>
<td>April 1, 2021</td>
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<tr>
<td>Innovative Project Award</td>
<td>Required by Tues, Nov 3, 2020</td>
<td>Invited Applicants: Tues, Feb 2, 2021</td>
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<td>Transformational Project Award</td>
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<td>Collaborative Sciences Award</td>
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<td>Invited Applicants: Tues, March 16, 2021</td>
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<tr>
<td>Strategically Focused Research Funding Opportunities</td>
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<tr>
<td>AHA and Enduring Hearts Research Awards in Pediatric Heart Transplantation</td>
<td>Required by Mon, June 1, 2020</td>
<td>Invited Applicants: Tues, Sept 1, 2020</td>
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<tr>
<td>AHA and Children’s Heart Foundation Congenital Heart Defects Research Awards</td>
<td>Tues, Sept 22, 2020</td>
<td>Jan. 1, 2021</td>
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<tr>
<td>Cardio-Oncology Strategically Focused Research Network</td>
<td>Tues, Oct 12, 2020</td>
<td>Tues, Dec 8, 2020</td>
<td>April 1, 2021</td>
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*Deadlines are subject to change.*
CVRI
Themes and Leadership

Aortopathy, Valvular Heart Disease

Scott LeMaire, MD
Surgery
Member, Executive Committee

Vijay Nambi, MD
Medicine/Cardiology
Theme Leader

Congenital Developmental Heart Disease

Mary Dickinson, PhD
Physiology
Member, Executive Committee

Daniel Penny, MD, PhD, MHA
Pediatrics/Cardiology
Member, Executive Committee

Coronary Artery Disease, Atherosclerosis, Ischemia

Christie Ballantyne, MD
Medicine/Cardiology
Member, Executive Committee

Changyi Johnny Chen, MD, PhD
Surgery
Theme Leader

Arrhythmias, Channelopathies

Xander Wehrens, MD, PhD
Physiology, Medicine
CVRI Director

Heart Failure, Cardiomyopathy

Biykem Bozkurt, MD
Medicine/Cardiology
CVRI Associate Director

Tom Cooper, MD
Pathology
Member, Executive Committee

Cardiac Regeneration, Stem Cells

James Martin, MD, PhD
Physiology
Member, Executive Committee

Gabriel Loor, MD, FACC
Surgery
Member, Executive Committee

Mark Entman, MD
Medicine, Cardiovascular Sciences
Member, Executive Committee

Email cvri@bcm.edu to sign up for free membership and get notified of upcoming events and opportunities!

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